Brigade Combat Team Modernization

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DPdM Network Systems

10 March 2010

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Standard Form 298 (Rev. 8-98)
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Agenda

- PEO-I Organization
- Increment 1 BCT
  - Capabilities
  - Schedule
  - Architectures
  - Radios and Waveforms
- Increment 2 Additional Capabilities

PEO Integration Reorganization Update

- Refining the PEO organization and mission

- Executing known projects and tasks
  - Increment 1
  - Follow-on Increment
  - Ground Combat Vehicle (GCV)

- Working closely with ASA(ALT) on scope of BCT Modernization

- Assessing emerging Army Capability Package Requirements
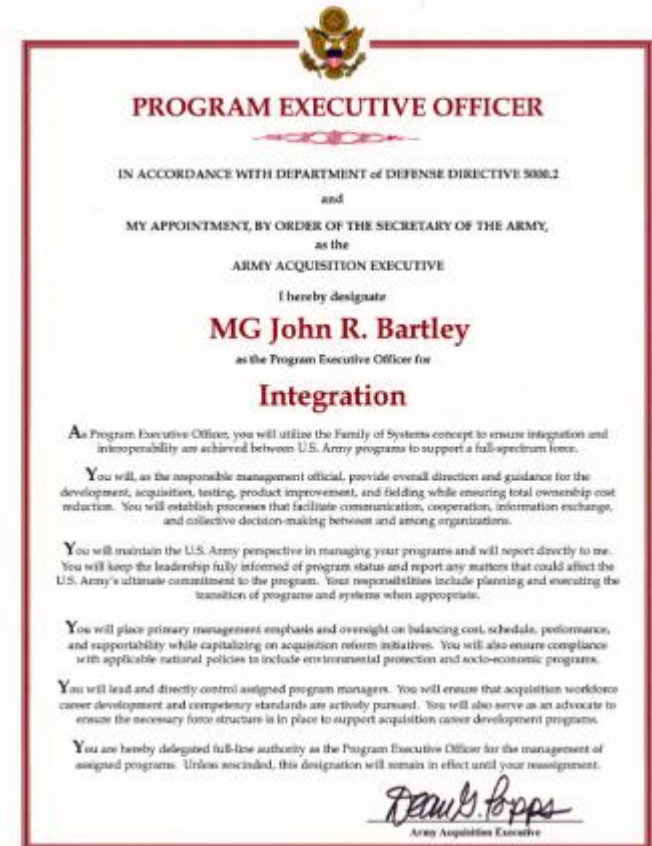
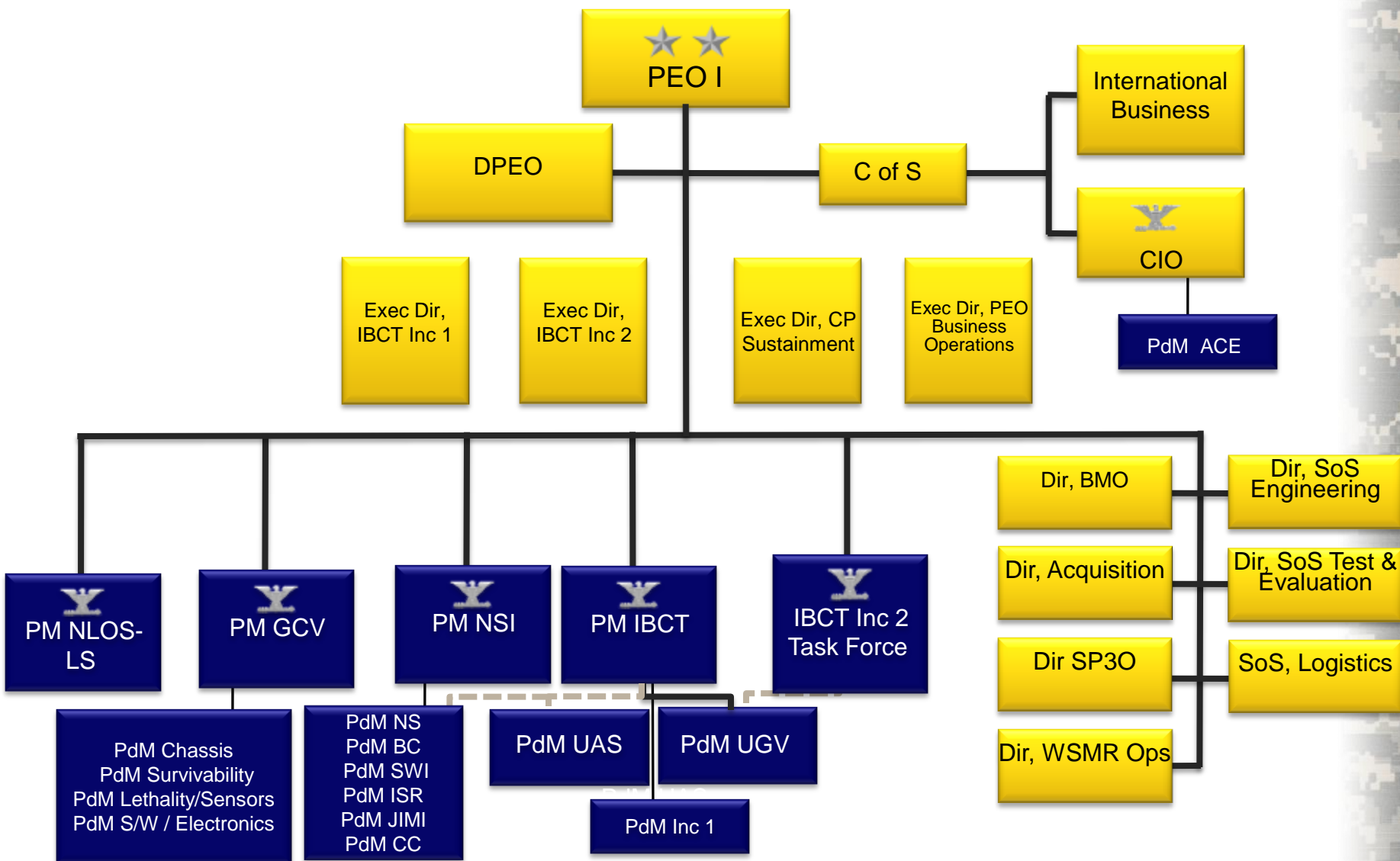# PEO Integration

- Mission

    The PEO Integration will utilize the Family of Systems approach to ensure integration and interoperability between Army Programs of Record (PORs), current force systems, urgent need systems, and other DOTL-PF elements to achieve integrated unit capabilities for a full-spectrum force. This integration approach will be implemented through development, acquisition, testing, product improvement and fielding while ensuring total ownership cost reduction.

- Vision

    To field fully integrated and tested capability packages composed of vehicles, network elements, equipment, and supporting infrastructure to modernize BCTs to achieve unprecedented joint combat capability in conjunction with the ARFORGEN process.

PROGRAM EXECUTIVE OFFICER

IN ACCORDANCE WITH DEPARTMENT of DEFENSE DIRECTIVE 5000.2

and

MY APPOINTMENT, BY ORDER OF THE SECRETARY OF THE ARMY,
as the
ARMY ACQUISITION EXECUTIVE

I hereby designate

MG John R. Bartley

as the Program Executive Officer for

Integration

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PEO Integration Organization FY 10

Organization chart:

- **PEO I** (★★)
  - **DPEO**
  - **C of S**
    - **International Business**
    - **CIO**
      - PdM ACE
  - Exec Dir, IBCT Inc 1
  - Exec Dir, IBCT Inc 2
  - Exec Dir, CP Sustainment
  - Exec Dir, PEO Business Operations
  - **PM NLOS-LS**
    - PdM Chassis
    - PdM Survivability
    - PdM Lethality/Sensors
    - PdM S/W / Electronics
  - **PM GCV**
    - PdM NS
    - PdM BC
    - PdM SWI
    - PdM ISR
    - PdM JIMI
    - PdM CC
  - **PM NSI**
  - **PM IBCT**
    - PdM UAS
    - PdM UGV
    - PdM Inc 1
  - **IBCT Inc 2 Task Force**
  - Dir, BMO
  - Dir, Acquisition
  - Dir SP3O
  - Dir, WSMR Ops
  - Dir, SoS Engineering
  - Dir, SoS Test & Evaluation
  - SoS, Logistics

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Increment 1 Brigade Combat Team...

Network Integration Kit

Unmanned Aircraft Systems (UAS)

Class I Unmanned Air Vehicle (UAV) XM 156

Unattended Systems

Non –Line of Sight Launch System (NLOS-LS) XM 501
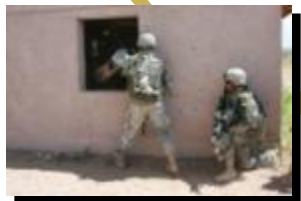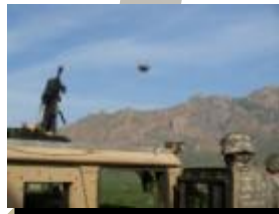
(T-UGS)
AN/GSR-10(T)

(U-UGS)
AN/GSR-9(U)

Small Unmanned Ground Vehicles (SUGV)

Small UGV (SUGV)
XM1216

Tactical and Urban Unattended Ground Sensors

Increment 1 E-IBCT Capabilities

- **Non-Line of Sight Launch System (NLOS-LS)**
  - Provides for extended range precision attack of armored, lightly armored and other stationary and moving targets during day, night, degraded weather conditions and in environments with countermeasures present
- **Tactical Unattended Ground Sensors (T-UGS)**
  - Provides Situational Awareness (SA) to protect the force and provide early warning to cross-cue other sensors and weapon systems, including Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Radiological and Nuclear (RN)-UGS
- **Urban Unattended Ground Sensors (U-UGS)**
  - Provides a leave-behind, network-enabled reporting system for situational awareness and force protection in an urban setting, as well as residual protection for cleared areas in urban operations
- **Class I Unmanned Aerial System Block 0 (CL I BLK 0)**
  - Provides an organic man-portable, unmanned hover & stare reconnaissance, surveillance, and target acquisition capability to the lowest echelon
- **Small Unmanned Ground Vehicle Block 1 (SUGV BLK 1)**
  - Provides SA/SU and ISR to dismounts in urban terrain enabling the performance of manpower intensive or high-risk functions without exposing Soldiers directly to the hazard
- **Range Extension Relay**
  - Provides the extended range for HMS SRW to the Network Integration Kit (NIK)
- **Network Integration Kit (NIK) (or "B-KIT") Increased Functionality in Battle Command**
  - Provides the introduction of the PEO I network and fusion of current force capability with the future force. Joint software programmable radio with multiple waveforms to share more information, connection to unattended sensors, connection to Joint Network Inc 1 Network Kits (HMMWV)

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Increment 1 Schedule
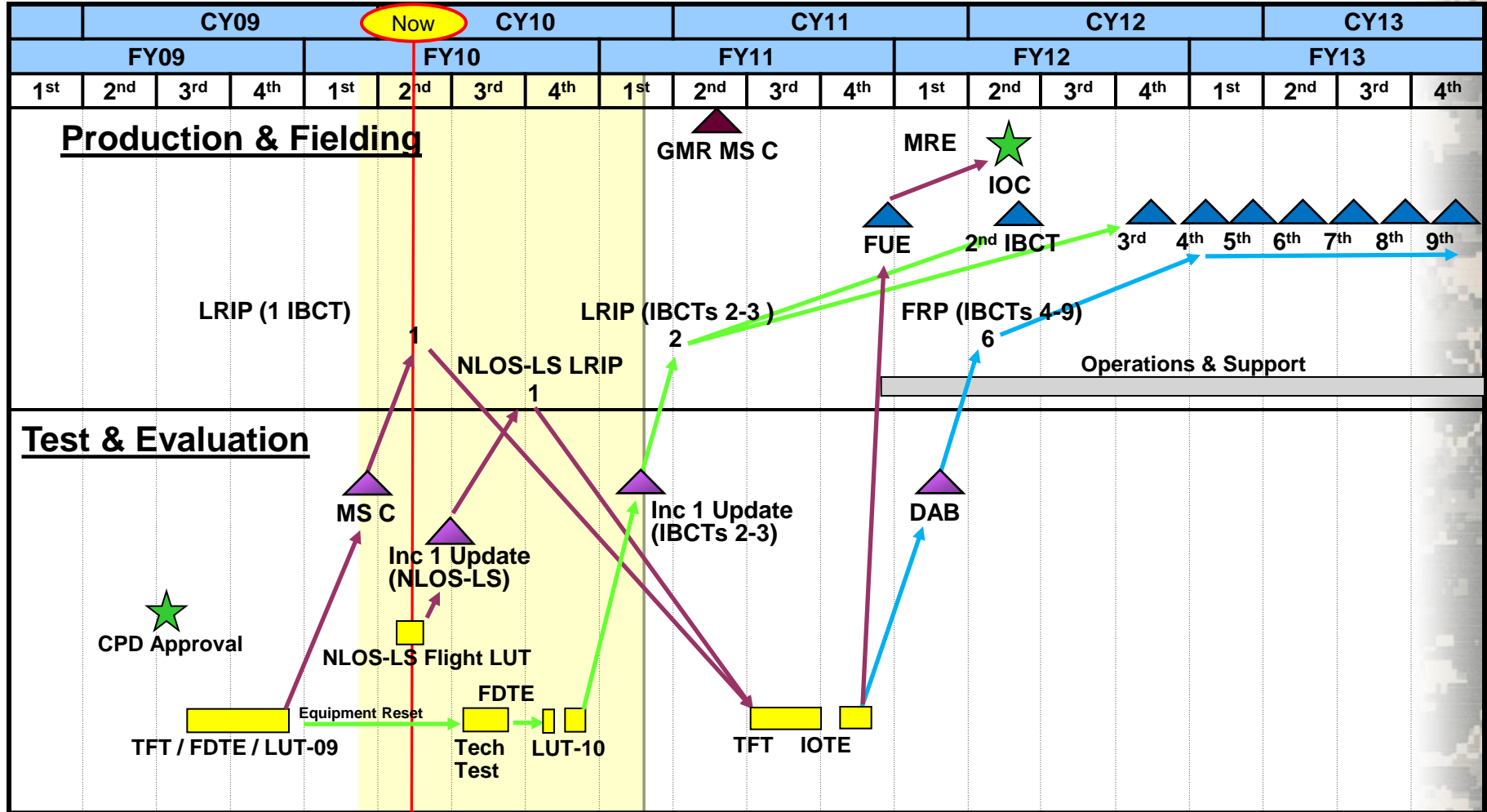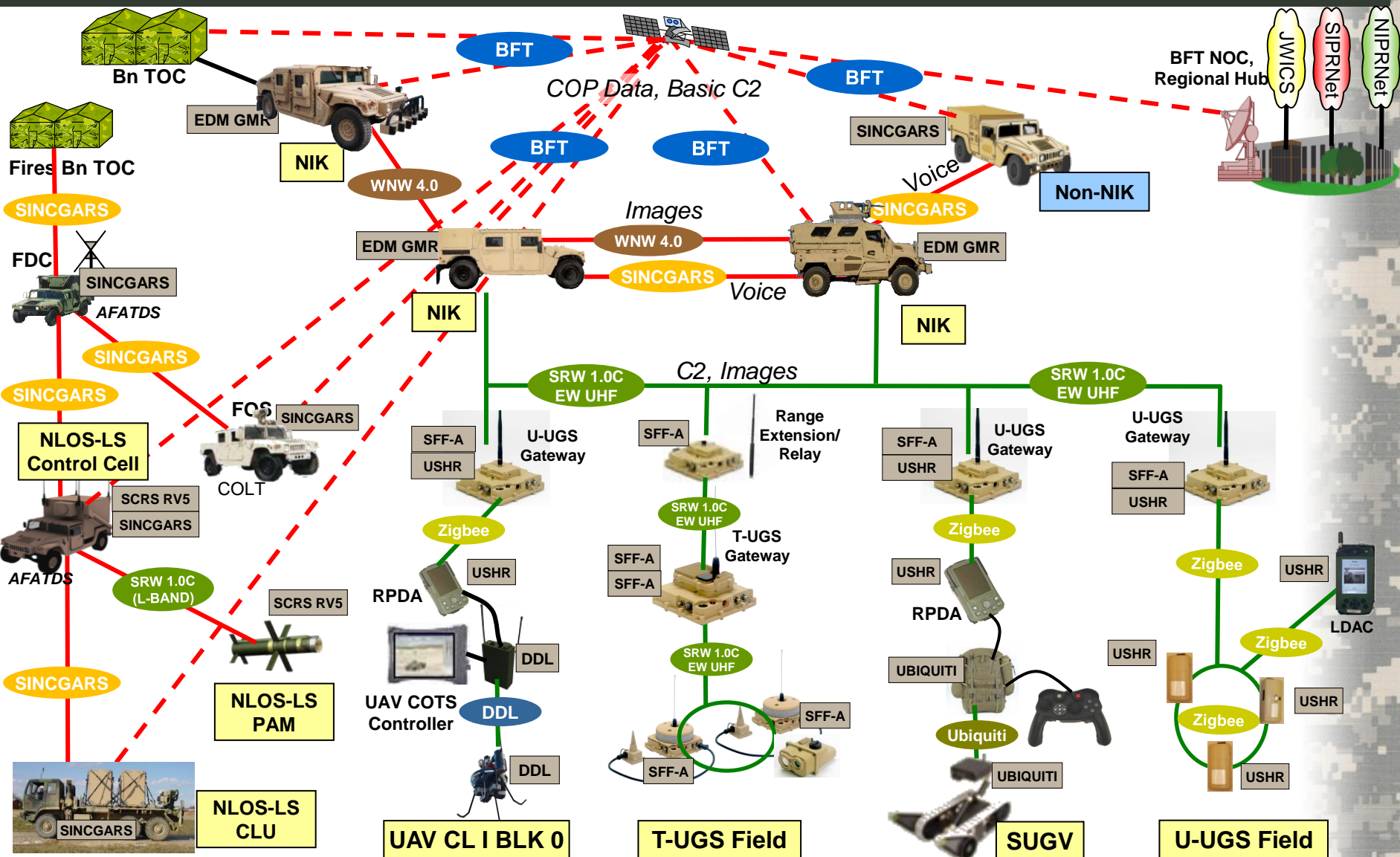
Recent Increment 1 Highlights

- Transitioned from HBCT to IBCT
- Accelerated the integration of UAS and SUGV
- Successfully completed TFTs, FDT&E, and LUT with AETF in an operationally relevant environment
- Successful CDR
- Achieved MS-C for Inc 1

"We are listening to our Soldiers and commanders in the field, and we are giving them the capabilities they need-as fast as we can so that they can win in the current fight. We are able to do this due to the technologies that have matured over the past few years." - GEN Casey, CSA
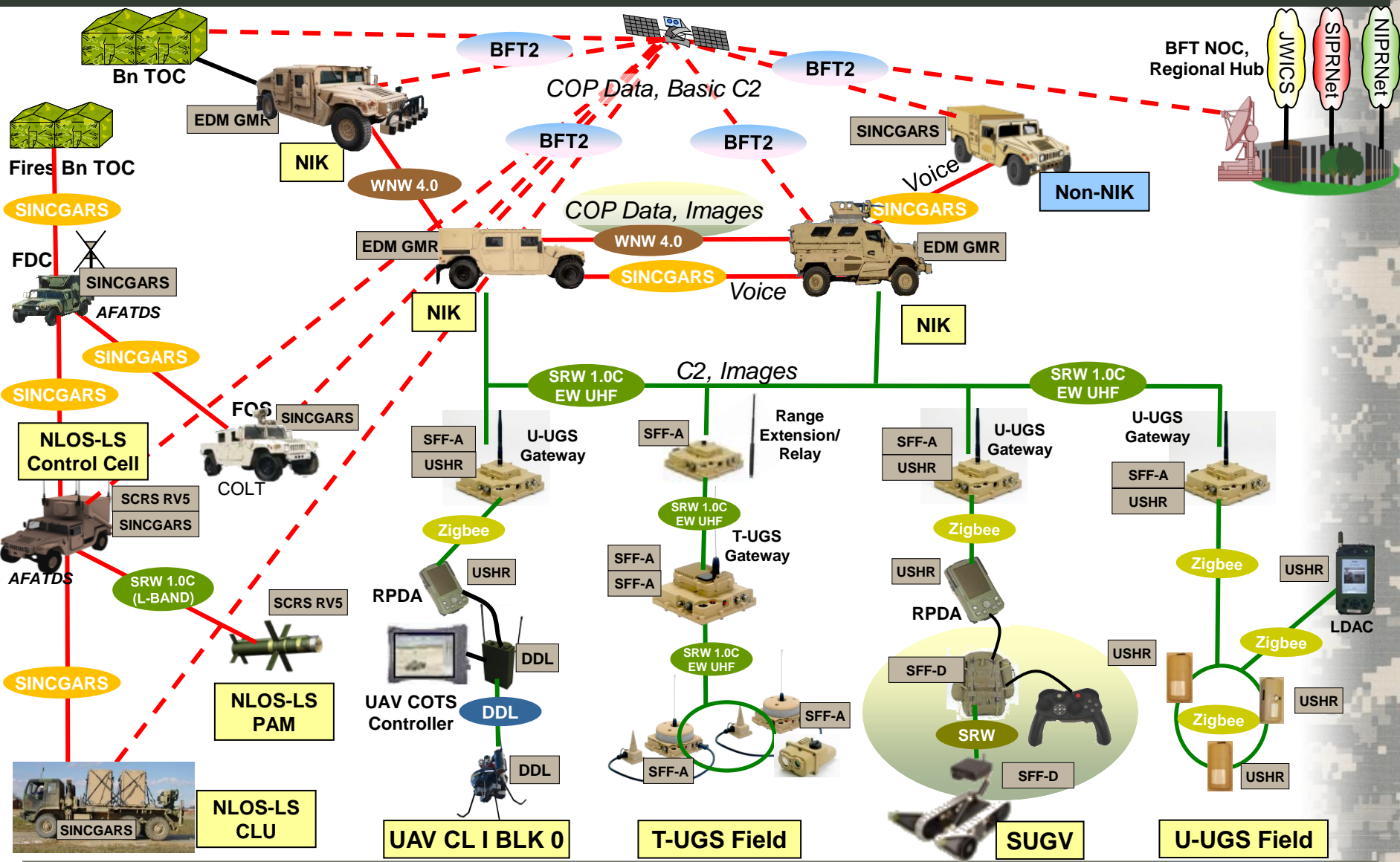
Increment 1 Network Architecture
IBCT 1-3 Fielding

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Updated Jan 25, 2010

Increment 1 Network Architecture
IBCT 4-9 Fielding

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Updated Jan 25, 2010

Inc 1 LRIP Radios and Waveforms

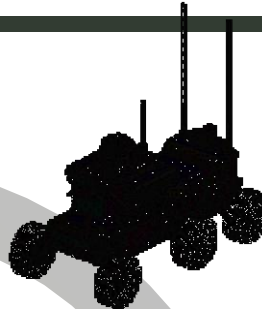|	Radio	Waveforms
NIK	EDM GMR – 4 channel BFT Transceiver	SRW 1.0c, WNW 4.0, SINCGARS v7.0 BFT
T-UGS Gateway	HMS SFF-A (LH) HMS SFF-A (SH)	SRW 1.0c (LH) SRW 1.0c (SH)
T-UGS SH nodes	HMS SFF-A	SRW 1.0c
U-UGS Gateway	HMS SFF-A (LH) UGS Short Haul Radio	SRW 1.0c (LH), IEEE 802.15.4 (SH)
U-UGS SH nodes	UGS Short Haul Radio	IEEE 802.15.4 (SH)
NLOS-LS CLU	SINCGARS	SINCGARS v7.0
NLOS-LS PAM	SCRS Radio	SRW 1.0c
NLOS-LS Control Cell	SCRS Radio SINCGARS	SRW 1.0c SINCGARS v7.0
SUGV	Ubiquiti SR4	802.11a
CL I UAS	DDL	SUAS DDL

Increment 2 IBCT Capabilities

Class I Unmanned Air Vehicle (UAV)
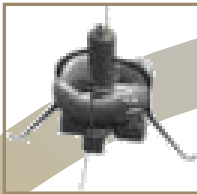
Non-Line of Sight Launch System (NLOS-LS)

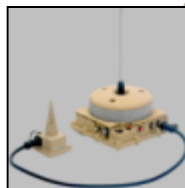**ARV- A(L)**

Network Integration Kits

Network Integration Kits

Common Controller

Small Unmanned Ground Vehicle (SUGV)

Tactical and Urban Unattended Ground Sensors (UGS)

Network Integration Kits

Updated NIKs with integration of improved computing, updated Battle Command incorporating advanced C2 (Orders processing, Whiteboard, Email, Distributed Fusion, integrated COP, plus additional BCS capabilities)

Tactical /Urban UGS

Block upgrade to UGS Software

Range Extension Relay

Block upgrade to UGS Software

Class I UAS – Block 1

Vehicle update with improved engine performance, incorporation of advanced EO/IR sensor and Laser Designation

Small Unmanned Ground Vehicle

Vehicle update with change to HMS Radio, advanced EO/IR sensor and incorporation of Tether

Common Controller

Development of Spiral 2 Common Controller for integration with SUGV, Class 1, and U-UGS in support of BCT4. Development of Spiral 3 CC with lighter weight packaging, advanced battle command and integration with GSE

ARV-A(L)

The ARV-A (L) is an armed unmanned ground vehicle. It consists of an operator control interface, chassis platform, video capability, digital communications and audio relay modules (plug in), and sensor mission modules. These systems will possess mobility to support dismounted forces. The ARV-A (L) is equipped with offensive weapons for line of sight (LOS) capability and a beyond line of sight (BLOS) capability.

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Questions?

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